

by Bob Hayashida

Principal Applications Engineer
Bently Nevada Corporation
e-mail: bob.hayashida@bently.com

Bently Nevada has been balancing rotating machinery for more than thirty years. In the early days, much of the balancing was done by hand, manually calculating influence and effect vectors and then plotting them graphically on paper. In the 70s, some of the first effective tools were developed for computer-assisted data reduction. These tools were also useful for balancing and evolved into the first ADRE® (Automated Diagnostics for Rotating Equipment) system.

In 1982, Bently Rotor Dynamics Research Corporation popularized the concepts of Dynamic Stiffness using forces, and stiffnesses to define the dynamic characteristics of the periodic motion of rotating machinery. These methods are now used worldwide to provide an effective methodology for balancing.

When it was released in the early 1990s, Bently Nevada's Multiplane Balancing Software filled an important need. It was a highly-intuitive software tool for dynamic balancing of rotors using up to 12 measurement planes and 12 correction planes.

We are now able to provide an even better software product – Bently BALANCE™ – to meet your needs and

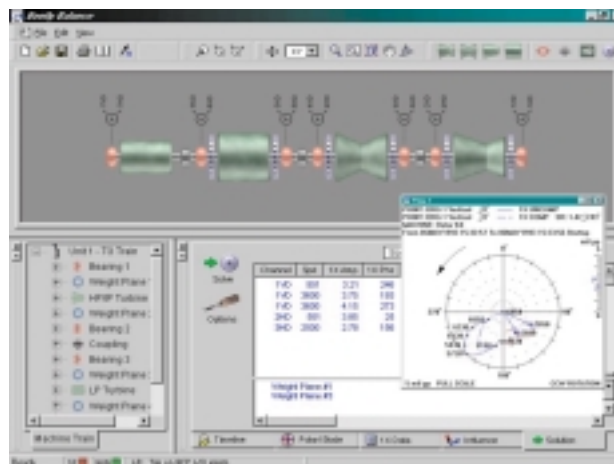


Figure 1. Bently BALANCE graphical interface showing rotor module and response at bearing.

those of our own Machinery Management Services organization. Bently BALANCE software enables you to:

- Automatically import data from Bently Nevada's ADRE for Windows databases (auto-extraction support for other Bently Nevada software products is planned in the future as well).
- Use a modern and highly graphical user-interface.
- Perform "what if" scenarios and graphical balancing solutions with calculated polar plot responses.
- Calculate, use, and manage multiple Influence Vectors.
- Balance for multiple speeds, or a range of speeds, under different load conditions.
- Handle your most complex balancing requirements – up to 16 XY measurement planes and a virtually unlimited number of correction planes.

- Provide manual entry of data, so it can be used in any application where amplitude and phase measurements are available, regardless of the data source.

- Provide detailed documentation, a history of balancing activity, and the results.

- Enjoy full support for Microsoft® Windows operating systems.

- Have Year 2000-compliant software.

Since successful balancing involves more than just a software tool, Bently Nevada also provides on-site training and balancing services. Please see the article on page 53 for information about our on-site balancing courses. If you prefer to have Bently Nevada's professionals balance your machinery for you, contact your nearest Bently Nevada sales professional and ask about our Machinery Management Services. We can provide one-time balancing services or a complete machinery management services contract, which encompasses all aspects of machinery condition.

Bently BALANCE will be available in the 4th quarter of 1999. So, get ready! Whether you perform on-site field balancing, shop balancing, or both, we can hardly wait to put our new balancing software into *your* hands. ☺